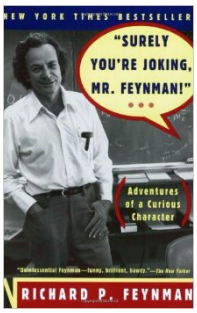
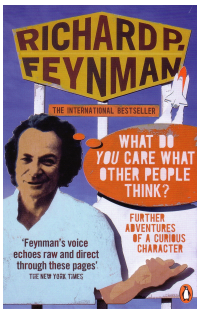
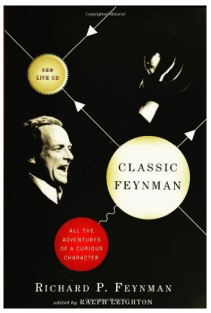
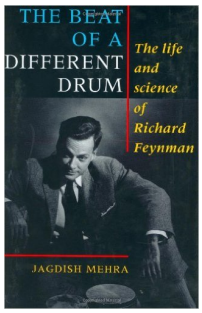
Classic Feynman: All the Adventures of a Curious Character *Richard P. Feynman, Ralph Leighton*
W. W. Norton & Company, 2005 ISBN 978-0393061321 (hbk), 528 pp.

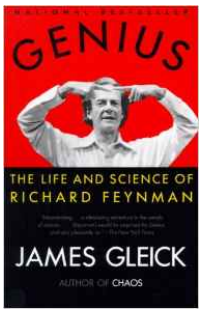






In 2005, two earlier books about the Nobel prize winning Richard Feynman (1918-1988) *Surely You're Joking, Mr. Feynman* (1985) and *What Do You Care What Other People Think?* (1988) were bundled into one volume: *Classic Feynman*. It is a collection of stories told by Feynman with a lot of humor. His friend Ralph Leighton taped the conversations and edited the books. This is indeed a collection of stories, involving only little mathematics or physics, and it should not be considered an (auto-)biography. Plain facts like that he contributed to the development of the atomic bomb in Los Alamos, that he shared the Nobel prize in 1965 for his work on quantum electrodynamics is background information here. Good to know but not essential. More 'scientific' biographies are written by James Gleick *Genius: The Life and Science of Richard Feynman* (Pantheon, 1992) or Jagdish Mehra *The Beat of a Different Drum: The Life and Science of Richard Feynman* (Oxford University Press, 1994) and many others followed in a slipstream of the megasuccess of the first SYJMF. The *Classic Feynman* comes with an extra audio CD with a one hour speech "Los Alamos from below" by Feynman. You can find this speech also on YouTube.





The stories are funny and you get some insight into Feynman's attitude towards science and society. Since the books have been around for a while, many extensive reviews can be found on the Web. His restless mind was always questioning, exploring, and inventing new things, he is an iconoclast not very keen on formal manners. As a youngster he learned himself to repair radios. As an undergraduate at MIT he pranked his fellow students at the Fraternity, and analysed his own dreams. When he got to Princeton, he arrived in an Oxford/Cambridge replica in full English tradition, including the accents, gowns at dinner, afternoon tea, etc. When the dean's wife asks him whether he likes lemon or milk in his tea, he answers absentmindedly "I'll have both", whereupon she answers "Heh-heh-heh-heh-heh... Surely you're joking, Mr. Feynman", which became the title of the first book. This was the first, but not the last time he heard this "Heh-heh-heh-heh-heh..." and learned that it meant he made a social error.

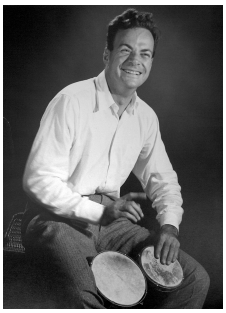
His first public seminar had the usual error of displaying too many formulas while Wigner, von Neumann, Einstein, Pauli and others attending. He was very relieved when they did not ask him questions, but the 'monster minds' discussed among themselves. Feynman's approach to problems is illustrated by his discussion with mathematicians. They claimed it was possible to cut up an orange in a finite number of pieces and put them back together to form a sphere bigger than the Sun. This is based on the Banach-Tarski theorem. However Feynman does not agree. They said 'an orange' and you cannot cut beyond the atomic scale. This shows his heuristic, no-nonsense approach he took in most problems he had to solve.

While he was working in Los Alamos on the ultra secret atomic bomb, he challenged his father and his wife to send him letters in code that he had to decipher. The censor demanded that they would include the key for him to read the message. So there was an arrangement that the censor would take the key out before handing the letters to Feynman.

He also tells how he got a fancy for picking locks and cracking safes which he uses in several pranks again. When after the war he wants to join the army, he is rejected for mental reasons, a consequence of his disliking of psychiatrists that he all classifies as fake. He can learn almost anything he sets his mind on. He shows off doing mental arithmetic and when he spends some time in Brazil, he learns to speak Portuguese, and for a conference in Japan, he impresses his colleagues with some Japanese sentences. At the conference, he insists in staying in a Japanese style hotel, unlike most of the other participants who resided in Western hotels. He liked Brazil very much and went several times, and made proposals to reform the teaching system for physics, and learns to play the *frigideiras* during Carnaval.

Ofey drawing

When challenged by a friend he learns to draw, and with success indeed since the gets commissions for portraits and an exhibition. He signs his artwork with the alias Ofey. He tells about tricks to survive gambling in Las Vegas, and what is the best way to pick up a girl in a bar (he's a notorious womanizer). Another hilarious story is when Feynman gives a lecture in a city college where it turns out to be impossible to pay him (but equally impossible not to pay him) a small amount of money for pure administrative reasons. Thirteen signatures were needed to finally cash a 50 dollar check. Equally funny is the story of conference about "the ethics of equality". The fluffy fuzzy formulations of the other participants from social sciences don't make any sense to Feynman as a physicist. He pledges never ever to go to a conference attended by a 'bunch of pompous fools' again. As member of a committee to evaluate the textbooks to be used in Californian public schools, he didn't want publishers to 'inform' him about their books, but did read them (growing into a grumbling volcano reading the out-of-this-world nonsensical math problems with totally unrealistic temperatures and colors of stars). Since one series of books was not ready in time, the publisher had sent in a dummy copy with blank pages. Hence Feynman did not give a score on that one. However other committee members did have scores even for those.... As a puzzle for himself he wanted to decipher a Mayan table of numbers he saw in a Mexican museum. He covered up the Spanish translation and found out that the repetition in the numbers corresponded to cycles of Venus. However, when he uncovered the Spanish text, it said something completely different. He so detected a fake codex that was used in the translation and so became and amateur 'expert' in Mayan arithmetic.



The second book was published shortly after Feynman died of cancer in 1988. Its main part is an account of Feynman's 'adventures' as part of the presidential Rogers Commission investigating the explosion of the Space Shuttle Challenger shortly after launch on January 28, 1986, leading to the deaths of its seven crew members. Feynman used his own direct methods, not following the schedule of the Commission. He so discovered the failure of O-Rings that caused a sealing breach due to resilience loss in low temperatures. He demonstrated this, immersing a sample of the rings in a glass of ice water during a televised hearing. He also discovered other flaws in the communication between engineers and executives. A typical Feynman pun is told at the beginning. When he arrived in Washington, he asked a taxi driver to bring him to 1415 8th street, which turned out to be an empty space way out of the center. The building was in front of his hotel across the street. Roger's offices were at 1415 H Street.

A short story is about his father and a longer one on a how he met his first wife Arline, who got tuberculosis during their dating period. He decides to marry her anyway and while he was in Los Alamos, working in the Manhattan Project, his wife resided near a hospital in Albuquerque a few hours driving away. She died in 1945 shortly before he finished his PhD. This story was used as the script for the movie *Infinity* by M. Boderick that was released in 1996. "What do you care what other people think?" was a sentence that Arline repeatedly said to him, and it became the title of the book.

The rest of the book are letters and brief stories, probably left-overs from the first book. Worth mentioning here is a letter to his (3rd) wife Gweneth that he sent on 11 October 1961 from Hotel Amigo in Brussels, while he was attending the Solvay Meeting on quantum field theory. After his talk the participants were invited for a reception at the Royal Palace, not at all Feynman's usual biotope. He is introduced to the king ('the present king is called Baudoin or something... he had a young semi-dopey face and a strong handshake') and the queen ('she is very pretty. I think her name is Fabriola – A Spanish countess she was'). Since the king wanted to know what they were doing there were lectures: 'the old boys give a set of six dull lectures –all very solemn– no jokes'. Later he is introduced again to the king and makes more protocol errors by trying to shake hands again and making jokes, causing embarrassing silences. Later he is asked to meet the queen ('pretty girl but don't worry, she's married'). The queen is sitting at a table with another lady and 'one Priest in Full Regalia (who is also a physicist) named LeMaître'. He continues, giving a short summary of his conversation with the queen. Next day he is invited at the home of the secretary of the queen who has a home 'built in Belgian style': 'after an old farmhouse' with furniture old and new style next to each other ('It is much easier to find antiques in Belgium than in Los Angeles').

Many years after this was published for the first time, it is still recommended reading. A. Bultheel